ter at regular intervals starting with the time set on the interval timer **102** until the prescribed number of samples has been taken.

To set the time of the first sample on the interval timer **102**, the timer set knob **110** is depressed and set to a position ahead of the position in which the permanent magnet **116** is aligned with the reed switch **118.** In one embodiment, the reed switch **118** and the permanent magnet **116** are arranged during assembly to be aligned with each other on the half hour and hour. In this embodiment, the timer clock **104** is set to the correct time and the timer switch **114** provides a signal to the pump motor control **120** on the half hour and hour.

In one embodiment the signal from the interval timer **102** actuates the pump motor control **120** to start the pump **70** each time that it is applied to the terminal **130.** In another embodiment, the signal from the interval timer **102** steps a stepping switch (not shown) within the pump motor control **120** and power is applied to the pump motor when certain selected contacts of the stepper switch are made, which contacts are selected to cause the pump to start at certain intervals that are multiples of half hours.

When the pump motor is started by the signal from the interval timer **102,** it draws fluid through the intake hose **16** into the funnel **72,** which guides it into the inlet of one of the plurality of distributor recesses **60** and **62.** The fluid flows from the inlet recess to the outlet recess and into one of the sample bottles **44** or **46** in the bottle compartment **42.**

As the pump motor rotates, it drives the pump drive switch **122** through reducing gears (not shown), until a camming surface on the reducing gear train depresses the actuating arm of a switch to apply a signal to the reverse terminal **132** of the pump motor control **120.** The reducing transmission and the camming surface are set so that the actuating arm is depressed when a predetermined amount of fluid has been pumped into the funnel **72.**

When this actuating arm is depressed, the pump motor is stopped and reversed. As the pump motor rotates in the reverse direction, it drives the pump drive switch **122** until a camming surface again depresses the actuating arm of a switch, which applies signals to the stop terminal **134** of the pump motor control **120** and to the on terminal **136** of the funnel motor control **124** to stop the pump motor and to actuate the funnel motor control **124.**

When the funnel motor control **124** is actuated, the funnel motor **126** is started and rotates the funnel **72.** When the downspout of the funnel **72** reaches the next inlet recess of the plurality of distributor recesses **60** and **62,** a camming surface on the funnel depresses the actuating arm of a switch in the funnel drive switch **128,** which applies a signal to the off terminal **138** of funnel motor control **124** to stop the funnel motor **126.**

Each time the interval timer generates a signal, this process is repeated until the funnel reaches a reset switch after the last bottle has been filled at which time the power to the interval timer is cut off.

From the above description, it can be understood that the sample collector of this invention has many advantages such as: (1) the sections of hose are short, connected directly to the pump, and are relatively straight and stationary during the operation of the sample collector so that clogging is reduced; (2) the hoses last longer and are easier to clear of fluid after a sample is drawn because they are not flexed; (3) one moving part, the funnel, distributes the samples in a circular direction and a stationary plastic part, the distributing plate, distributes the fluid radially through inlets, passageways and outlets that are molded into it, thus permitting the sample collector to be simple in construction, inexpensive and durable; and (4) the tolerances provided by the distributor plate and its ability to be accurately positioned, eliminates spillage of the fluid.

Although a preferred embodiment of the invention has been described with some particularity, many variations and modifications in the preferred embodiment are possible in the light of the above teachings. Accordingly, it is to be understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A fluid control system for guiding the fluid from a body of fluid through a sample collector into a plurality of containers, comprising:

channel-inlet means having internal wall portions defining a plurality of channel inlets;

channel-outlet means having internal wall portions defining a plurality of channel outlets;

channel means for guiding fluid applied to at least one of said channel inlets to at least one of said channel outlets;

certain of said channel outlets being adapted to be positioned directly over a different one of said containers, whereby fluid applied to one of said channel-inlets is guided into one of said containers without passing through any curved lengths of tubes;

sample-collector inlet means having internal walls defining at least one sample-collector inlet;

pump outlet means having internal walls defining, at least one pump outlet;

pump means for pumping fluid between said sample-collector inlet and said pump outlet;

fluid-guide outlet means having internal walls defining at least one fluid-guide outlet;

rotatable fluid-guide means for receiving fluid from said pump outlet and guiding said fluid to different ones said channel inlets;

said pump outlet means being stationary and communicating with said fluid-guide means;

said rotatable fluid-guide means including fluid-guide inlet means for communicating with said stationary pump outlet while said movable fluid-guide means rotates, whereby said pump outlet assumes different positions with respect to said rotatable fluid-guide means while remaining in communication with the interior thereof;

said rotatable fluid-guide means having a vertical axis of rotation;

said rotatable fluid-guide means including drive means for rotating said rotatable fluid-guide means about said vertical axis of rotation;

said fluid-guide inlet means having internal walls defining a fluid-guide inlet;

said channel means including a distributor plate;

said distributor plate including a plurality of recesses and perforations;

said recesses defining said channel-inlet means and said perforations defining said channel-outlet means.